

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2019 Office of the Secretary Of Defense	<b>Date:</b> February 2018
---	----------------------------

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0307577D8Z I <i>Intelligence Mission Data (IMD)</i>
---	--

COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	13.485	13.111	6.889	-	6.889	7.002	6.891	6.189	6.178	Continuing	Continuing
715: <i>Intelligence Mission Data</i>	0.000	13.485	13.111	6.889	-	6.889	7.002	6.891	6.189	6.178	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

IMD project supports the Department's governance process for balancing IMD supply and demand and addressing how to modernize IMD generation. In order to support weapons systems with intelligence data, we need to improve the modeling, simulation and assessment process for weapon systems prior to material solutions to better understand investment needs for both platforms and intelligence data. IMD is all source intelligence derived data necessary to do the following for weapon systems: to identify and counter constantly improving threat weapons and radar systems; optimize sensor design and validate sensor functionality; and support system test, evaluation and deployment. Modern weapon systems are reliant upon increasingly voluminous and precise IMD to meet performance requirements. This demand signal for mission support data is increasing due to requirements for both analyst-evaluated, precise data and machine-processed data to be used by weapons and control systems with increasing autonomy. This increasing requirement is highlighting the need to have a big data/data autonomy environment to support advanced weapon systems. In order for the community to meet modern weapons system requirements, there needs to be a measured shift with balance and attention paid to legacy and new capability needs. There are unacceptable gaps, compounded by non-assessed program office needs and requirements that may not be obtainable; therefore, balancing supply and demand is urgently needed.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
Previous President's Budget	13.800	13.111	12.944	-	12.944
Current President's Budget	13.485	13.111	6.889	-	6.889
Total Adjustments	-0.315	0.000	-6.055	-	-6.055
• Congressional General Reductions	-0.015	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.300	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-6.055	-	-6.055

**Change Summary Explanation**

Transfer \$6M per year to O&M from RDT&E in order to continue implementation (people) and sustainment of tools for the Annual Priorities and Risk Management Framework process, provide funding to assist with Intelligence Mission Data (IMD) data flow (existing systems upgrades and maintenance), and support personnel in the Office of the Under Secretary of the Defense Intelligence (OUSD(I) to work Intelligence Support to Acquisition issues.

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2019 Office of the Secretary Of Defense										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0307577D8Z / Intelligence Mission Data (IMD)				Project (Number/Name) 715 / Intelligence Mission Data			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
715: Intelligence Mission Data	0.000	13.485	13.111	6.889	-	6.889	7.002	6.891	6.189	6.178	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

IMD project supports the Department's governance process for balancing IMD supply and demand and addressing how to modernize IMD generation. In order to support weapons systems with intelligence data we need to improve the modeling, simulation and assessment process for weapon systems prior to material solutions to better understand investment needs for both platforms and intelligence data. IMD is all source intelligence derived data necessary to do the following for weapon systems: to identify and counter constantly improving threat weapons and radar systems; optimize sensor design and validate sensor functionality; and support system test, evaluation and deployment. Modern weapon systems are reliant upon increasingly voluminous and precise IMD to meet performance requirements. This demand signal for mission support data is increasing due to requirements for both analyst-evaluated, precise data and machine-processed data to be used by weapons and control systems with increasing autonomy. This increasing requirement is highlighting the need to have a big data/data autonomy environment to support advanced weapon systems. In order for the community to meet modern weapons system requirements, there needs to be a measured shift with balance and attention paid to legacy and new capability needs. There are unacceptable gaps, compounded by non-assessed program office needs and requirements that may not be obtainable; therefore, balancing supply and demand is urgently needed.

## B. Accomplishments/Planned Programs (\$ in Millions)

	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<b>Title:</b> Intelligence Mission Data	13.485	13.111	6.889
<b>Description:</b> The IMD project supports the Department's governance process for balancing IMD supply and demand and addressing how to modernize IMD generation. Modern weapon systems are reliant upon increasingly voluminous and precise IMD to meet performance requirements, causing IMD shortfalls. The Department resolved to correct IMD problems by chartering a temporary task force. The AIRTF has continued to enforce discipline, bridge long standing policy, cultural and financial divides among these three communities, and seeks innovative approaches to solutions.			
<b>FY 2018 Plans:</b> <ul style="list-style-type: none"> <li>- Will evaluate, with Department's outreach element to industry, on state of the art automation tools, big data options, and data autonomy environments to directly connect nodal IMD users with data suppliers.</li> <li>- Will develop data algorithms and models for use by the Intelligence Community and operational forces on weapon systems and platform sensors to collect, generate, and utilize IMD autonomously.</li> <li>- Will continue the development and evaluation of a holistic IMD architecture supporting the Department's Third Offset effort and 5th Generation warfighting concepts.</li> <li>- Will modernize the current architecture to increase efficiency for IMD reprogrammers to access, analyze, and produce mission data files for operational forces to support legacy and future machine-centric production.</li> </ul>			

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Office of the Secretary Of Defense								<b>Date:</b> February 2018			
<b>Appropriation/Budget Activity</b> 0400 / 7				<b>R-1 Program Element (Number/Name)</b> PE 0307577D8Z / <i>Intelligence Mission Data (IMD)</i>				<b>Project (Number/Name)</b> 715 / <i>Intelligence Mission Data</i>			
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>								<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	
<p>- Will build better program plans for IMD demands by integrating full scale Cost vs. Capability Analysis (CCA) with blue and red modeling and simulation modules to form a force-on-force campaign analysis capability to focus and prioritize IMD demands.</p> <p>- Will increase efficiency and production balance for IMD supply by continuing the enterprise-wide dashboard tool to monitor IMD supply, demand, and workflow management.</p> <p>- Will improve enterprise-wide access to IMD sources by continuing data and database standardization, increase data discoverability, and user access.</p> <p><b><i>FY 2019 Plans:</i></b> The R&amp;D funds will support continued efforts with the Joint Simulation Environment to determine IMD sufficiency, standardization, prototyping and development of new systems (automation) which will be utilized to better support 5th Gen Weapon systems.</p> <p><b><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i></b> Transfer \$6M per year from RDT&amp;E to O&amp;M in order to continue implementation (people) and sustainment of tools for the Annual Priorities and Risk Management Framework process, provide funding to assist with IMD data flow (existing systems upgrades and maintenance), and support personnel in OUSD(I) to work Intelligence Support to Acquisition issues.</p>											
<b>Accomplishments/Planned Programs Subtotals</b>								13.485	13.111	6.889	
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0307577D8Z: <i>Intelligence Mission Data</i>	1.041	0.938	5.778	-	5.778	5.856	5.940	6.023	6.110	Continuing	Continuing
<b>Remarks</b>											
<b>D. Acquisition Strategy</b>											
<p>The acquisition, management, and contracting strategy involves the following:</p> <ul style="list-style-type: none"> <li>• Adhere to guidance outlined in the DoD 5000, Directive 7, Federal Acquisition Regulations (FAR), and FAR Supplement Policies and Procedures.</li> <li>• Acquire and sustain IMD capabilities, systems, tools, products, and services through a disciplined, yet agile, process that ensures information related capabilities are available for DoD components.</li> <li>• Sustain an acquisition process that is responsive and responsible to internal and external customers and stakeholders.</li> <li>• Support advanced weapons programs need for intelligence at the earliest point in the acquisition of the program.</li> </ul>											

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Office of the Secretary Of Defense		<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0307577D8Z / <i>Intelligence Mission Data (IMD)</i>	<b>Project (Number/Name)</b> 715 / <i>Intelligence Mission Data</i>
<b>E. Performance Metrics</b> <p>Performance metrics are used to assess the progress toward integrating intelligence mission data into the acquisition cycle. The following metrics focus on the return on investment of RDTE and O&amp;M activities and assess the degree to meeting mission goals:</p> <ul style="list-style-type: none"><li>• Measure percent of funds that are used to improve advanced weapons platforms intelligence integration. Goal is 100%.</li><li>• Measure percent of identified advanced weapons systems platforms that have a minimum baseline for IMD requirements and production. Goal is 100%.</li></ul>		

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Office of the Secretary Of Defense												Date: February 2018			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0307577D8Z / Intelligence Mission Data (IMD)				Project (Number/Name) 715 / Intelligence Mission Data					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Cost Capability analysis (CCA) with Force-on-Force Campaign Analysis (FCA)	Option/ Various	Various : Various	-	1.518		0.630		0.892		-		0.892	Continuing	Continuing	Continuing
Subcategory: Joint Simulation Environment (JSE) IMD Quality Program	C/ FFPLOE	Navy (NAWCAD) and Air Force (SIMAF) : Pax River, MD and WPAFB, OH	-	1.410		0.900		-		-		-	0.000	2.310	2.310
Subcategory: IMD Tools for Signals Generation	C/ FFPLOE	Navy (NAWCAD) : PAX River, MD	-	2.000		-		-		-		-	0.000	2.000	2.000
Enterprise-wide Source Data Access	Various	Various : Various	-	1.335		-		2.350		-		2.350	0.000	3.685	3.685
Subcategory: IMD System Support for 5th Gen Weapon Autonomy	C/FFP	Army (ACC-New Jersey) : Picatinny Arsenal, NJ	-	1.110		-		-		-		-	0.000	1.110	1.110
Intelligence Mission Data (IMD) Automation	Various	Various : Various	-	0.257		1.007		-		-		-	0.000	1.264	1.264
Subcategory: Emitter Intercept Model (EIM) for Intelligence Mission Data (IMD) to the Cockpit	C/CPAF	NSAC/FCB : Denver, CO	-	1.815		0.800		-		-		-	0.000	2.615	2.615
Subcategory: IMD OEM Automated Workflow	C/TBD	TBD : TBD	-	-		3.000		1.200		-		1.200	Continuing	Continuing	Continuing
Subcategory: Algorithmic EW	C/TBD	TBD : TBD	-	-		2.026		1.647		-		1.647	0.000	3.673	Continuing
Subcategory: Intercept Transition Logic Map Algorithm Generation	C/TBD	NASIC/GXS : WPAFB, OH	-	2.035		-		-		-		-	0.000	2.035	2.035
Subtotal			-	11.480		8.363		6.089		-		6.089	Continuing	Continuing	N/A

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Office of the Secretary Of Defense												Date: February 2018			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0307577D8Z / Intelligence Mission Data (IMD)				Project (Number/Name) 715 / Intelligence Mission Data					
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Other	Various	Various : Various	-	-		0.900		-		-		-	0.000	0.900	0.900
Subcategory: AIRVIEW	SS/FFP	WHS/AD : Arlington, VA	-	-		1.615	Nov 2017	-		-		-	0.000	1.615	1.615
Subtotal			-	-		2.515		-		-		-	0.000	2.515	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Cost Capability analysis (CCA) with Force-on-Force Campaign Analysis (FCA)	C/Various	Various : Various	-	-		0.451		0.800		-		0.800	0.000	1.251	1.251
Subcategory: Fusion Test Bed Red Model Support	Various	GSA : Great Lakes, MI and Fairborn, OH	-	1.307	Nov 2017	-		-		-		-	0.000	1.307	1.307
Subtotal			-	1.307		0.451		0.800		-		0.800	0.000	2.558	N/A
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Cost Capability Analysis	FFRDC	AFLCMC/AZS : Hanscom AFB	-	0.306	Aug 2017	1.432		-		-		-	0.000	1.738	1.738
Other	Various	Various : Various	-	0.392		-		-		-		-	0.000	0.392	0.392
Intelligence Mission Data (IMD) Automation	TBD	TBD : TBD	-	-		0.350		-		-		-	0.000	0.350	0.350
Subtotal			-	0.698		1.782		-		-		-	0.000	2.480	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	13.485		13.111		6.889		-		6.889	Continuing	Continuing	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Office of the Secretary Of Defense							Date: February 2018		
Appropriation/Budget Activity 0400 / 7			R-1 Program Element (Number/Name) PE 0307577D8Z / Intelligence Mission Data (IMD)			Project (Number/Name) 715 / Intelligence Mission Data			
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Remarks									

## UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Office of the Secretary Of Defense Date: February 2018

<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0307577D8Z / Intelligence Mission Data (IMD)	<b>Project (Number/Name)</b> 715 / Intelligence Mission Data
--	---	---

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>Intelligence Mission Data (IMD) Automation</b>																												
Concept/Architecture Analysis																												
EWIR IMD Automation Prototyping																												
End-to-End Data Flow Demonstrations																												
Signatures Phenomenologies Automation Prototyping																												
<b>Cost Capability Analysis (CCA) with Force-on-Force Campaign Analysis (FCA)</b>																												
Determine CCA Needs																												
Pilot Single-Platform and Multi-Platform Concepts																												
Execute IMD Sufficiency Analysis for Single-platform Environment																												
Develop Additional Models and Scenarios in the FCA Environment																												
Execute IMD Sufficiency Analysis for FCA																												
<b>Enterprise-wide Source Data Access</b>																												
Electronic Warfare Database Accessibility Enhancement Pilot Project																												
IMD Databases Content Management (CM) Application Programming Interfaces (APIs) Pilot																												
Support for CM APIs Wide Adoption																												
<b>Other</b>																												
Acquisition Intelligence Workforce Training Course Development																												



UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Office of the Secretary Of Defense																								Date: February 2018													
Appropriation/Budget Activity 0400 / 7										R-1 Program Element (Number/Name) PE 0307577D8Z / Intelligence Mission Data (IMD)										Project (Number/Name) 715 / Intelligence Mission Data																	
										FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
										1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Acquisition Intelligence Manpower Analysis/ Assessment										<div></div>																											
Develop Dashboard for Intelligence Data Requirements and Production Planning										<div></div>																											

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Office of the Secretary Of Defense			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0307577D8Z / <i>Intelligence Mission Data (IMD)</i>	<b>Project (Number/Name)</b> 715 / <i>Intelligence Mission Data</i>	

**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Intelligence Mission Data (IMD) Automation</i></b>				
Concept/Architecture Analysis	4	2017	4	2018
EWIR IMD Automation Prototyping	4	2017	1	2023
End-to-End Data Flow Demonstrations	2	2019	2	2023
Signatures Phenomenologies Automation Prototyping	2	2020	4	2023
<b><i>Cost Capability Analysis (CCA) with Force-on-Force Campaign Analysis (FCA)</i></b>				
Determine CCA Needs	3	2017	4	2017
Pilot Single-Platform and Multi-Platform Concepts	4	2017	1	2019
Execute IMD Sufficiency Analysis for Single-platform Environment	2	2018	3	2018
Develop Additional Models and Scenarios in the FCA Environment	3	2018	4	2023
Execute IMD Sufficiency Analysis for FCA	2	2019	3	2023
<b><i>Enterprise-wide Source Data Access</i></b>				
Electronic Warfare Database Accessibility Enhancement Pilot Project	3	2017	2	2018
IMD Databases Content Management (CM) Application Programming Interfaces (APIs) Pilot	2	2018	2	2019
Support for CM APIs Wide Adoption	1	2019	4	2022
<b><i>Other</i></b>				
Acquisition Intelligence Workforce Training Course Development	2	2018	2	2019
Acquisition Intelligence Manpower Analysis/Assessment	2	2018	4	2018
Develop Dashboard for Intelligence Data Requirements and Production Planning	1	2018	1	2019